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of subchapter F (Marine Engineering) of this chapter.

- (b) An adequate number of valves shall be installed to isolate damaged sections of piping except on self-propelled vessels carrying bulk liquefied gases that must have stop valves:
 - (1) At cross connections;
- (2) At the front of the after deck house; and
- (3) In the cargo area spaced 40 m (131 ft.) or less between hydrants.
- (c) All distribution valves shall be marked as required by §35.40–10 of this subchapter.
- (d) Tankships of 500 gross tons and over on an international voyage must be provided with at least one international shore connection which meets ASTM F 1121 (incorporated by reference, see §34.01–15). Facilities must be available enabling such a connection to be used on either side of the vessel.
- (e) For tankships on an international voyage, the diameter of the fire main shall be sufficient for the effective distribution of the maximum required discharge from two fire pumps operating simultaneously. This requirement is in addition to §34.10-5(b). The discharge of this quantity of water through hoses and nozzles at a sufficient number of adjacent hydrants shall be at a minimum Pitot tube pressure of approximately 71 pounds per square inch on self-propelled vessels that carry bulk liquefied gases and approximately 50 pounds per square inch on other tankships.

[CGFR 65-50, 30 FR 16694, Dec. 30, 1965, as amended by CGD 74-289, 44 FR 26006, May 3, 1979, CGD 88-032, 56 FR 35821, July 29, 1991; USCG-2000-7790, 65 FR 58459, Sept. 29, 2000]

$\$\,34.10\mbox{--}90$ Installations contracted for prior to May 26, 1965—T/ALL.

- (a) Installations contracted for prior to January 1, 1962, shall meet the following requirements:
- (1) Existing arrangements, materials and facilities previously approved shall be considered satisfactory so long as they meet the minimum requirements of this paragraph and they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alter-

ations may be made to the same standards as the original installation.

- (2) Except as further modified by this paragraph, the details of the systems shall be in general agreement with §§34.10–5 through 34.10–15 insofar as is reasonable and practicable.
- (3) Tankships of less than 500 gross tons shall be equipped with an efficient hand pump capable of delivering 50 gallons per minute or a power-driven pump of equivalent capacity. However, on tankships of 20 gross tons or under where it is impracticable to install a hand or power-operated fire pump, or on tankships with only one man in the crew, at least one additional B-II fire extinguisher may be accepted in lieu of a fire pump.
- (4) Tankships of 500 gross tons and over but not over 1,000 gross tons shall be provided with one independently power-driven pump.
- (5) Tankships of over 1,000 gross tons shall be provided with two independently power-driven pumps.
- (6) On tankships of 500 gross tons and over, the capacity of the combined fire pump installation shall be one-fifth gallon per minute per gross ton of the ship. The maximum total fire pump capacity required for any tankship shall be 800 gallons per minute.
- (7) Each fire pump on a tankship of 500 gross tons or more must deliver enough water to the fire main so that the topmost outlet on the fire main emits two jets of water at a Pitot tube pressure of 50 pounds per square inch through two combination solid stream and water spray firehose nozzles meeting paragraph (10) of this section.
- (8) On oil-burning tankships, provided with two fire pumps, where the engine and fire rooms are not entirely separated by iron or steel bulkheads, or if fuel can drain from fireroom bilges into the engineroom, one of the fire pumps shall be located in an accessible space separate from the machinery compartment. On all tankships contracted for on or after November 19, 1952, the requirements of paragraph (f) of § 34.10–5 shall be met.
- (9) Fire hydrant outlets shall have a minimum diameter of 1½ inches.
- (10) Each fire station hydrant on a tankship of 500 gross tons or more must have at least 1 length of firehose. Each

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firehose on the hydrant must have a combination solid stream and water spray firehose nozzle that meets the requirements of subpart 162.027. Firehose nozzles previously approved under subpart 162.027 of this chapter may be retained so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection.

- (11) On each tankship of 1000 gross tons or more, the firehose nozzle required by paragraph (a)(10) of this section on each of the following hydrants must have a low-velocity water-spray applicator that was previously approved under subpart 162.027 and that connects to that nozzle when the nozzle itself was previously approved under subpart 162.027—
- (i) At least two hydrants in the Machinery and boiler spaces; and
- (ii) At least 25 percent of other hydrants.
- (12) Vessels contracted for on or after July 1, 1954, shall meet the requirements of §34.10-10(h).
- (b) Installations contracted for on or after January 1, 1962, but prior to May 26, 1965, shall meet the following requirements:
- (1) Existing arrangements, materials, facilities, and equipment, except firehose nozzles, previously approved shall be considered satisfactory as long as they meet the minimum requirements of this paragraph and they are maintained in good conditions to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original installation.
- (2) Each fire station hydrant must have at least 1 length of firehose. Each firehose on the hydrant must have a combination solid stream and water spray firehose nozzle that meets the requirements of subpart 162.027. Firehose nozzles previously approved under subpart 162.027 of this chapter may be retained so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. If the firehose nozzles were previously approved under subpart 162.027, each of the number of hydrants in the locations listed in table 34.10-10(E) must have a low-velocity water spray applicator that-

(i) Was previously approved under subpart 162.027 of this chapter;

- (ii) Is the length listed in table 34.10-10(E); and
- (iii) Meets §34.10-10(o).

[CGFR 65-50, 30 FR 16694, Dec. 30, 1965, as amended by CGD 76-086, 44 FR 2391, Jan. 11, 1979; CGD 95-027, 61 FR 25999, May 23, 1996]

Subpart 34.13—Steam Smothering Systems

SOURCE: CGD 95-027, 61 FR 25999, May 23, 1996, unless otherwise noted.

§34.13-1 Application—T/ALL.

Steam smothering fire extinguishing systems are not permitted on vessels contracted for on or after January 1, 1962. Previously approved installations may be retained as long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection.

Subpart 34.15—Carbon Dioxide Extinguishing Systems, Details

§34.15-1 Application—T/ALL.

- (a) Where a carbon dioxide extinguishing system is installed, the provisions of this subpart, with the exception of §34.15–90, shall apply to all installations contracted for on or after January 1, 1962. Installations contracted for prior to January 1, 1962, shall meet the requirements of §34.15–90
- (b) The requirements of this subpart are based on a "high pressure system," i.e., one in which the carbon dioxide is stored in liquid form at atmospheric temperature. Details for "low pressure systems," i.e., those in which the carbon dioxide is stored in liquid form at a continuously controlled low temperature, may be specifically approved by the Commandant where it is demonstrated that a comparable degree of safety and fire extinguishing ability is achieved.

§ 34.15–5 Quantity, pipe sizes, and discharge rates—T/ALL.

(a) General. (1) The amount of carbon dioxide required for each space shall be as determined by paragraphs (b) through (d) of this section.